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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2019 Defense Health Agency **Date:** February 2018

<b>Appropriation/Budget Activity</b> 0130: <i>Defense Health Program I BA 2: RDT&amp;E</i>					<b>R-1 Program Element (Number/Name)</b> PE 0607100DHA I <i>Medical Products and Capabilities Enhancement Activities</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	69.885	14.953	13.438	15.714	-	15.714	16.819	17.215	17.619	17.971	Continuing	Continuing
377A: <i>GDF-Medical Products and Capabilities Enhancement Activities</i>	66.167	14.953	13.438	15.714	-	15.714	16.819	17.215	17.619	17.971	Continuing	Continuing
457A: <i>AF Advanced Technology Development – Rapid Technology Transition</i>	1.336	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
700A: <i>CSI - Congressional Special Interests</i>	2.382	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Guidance for Development of the Force-Medical Products and Capabilities Enhancement Activities: Funds will support (1) developmental upgrades to medical systems and products that have been fielded, are routinely used in a fixed facility, or that have been approved for full-rate production and for which procurement funding is anticipated in the current fiscal year or subsequent fiscal years, (2) testing and evaluation supporting the enhancement of fielded or procured medical systems/products and medically-related information technology systems, (3) assessment of fielded medical products or medical practices in order to identify the need/opportunity for changes, and (4) analyses of clinical intervention outcomes to enhance and improve military unique Clinical Practice Guidelines. Efforts address the Military Health System Concept of Operations documents and follow-on Capabilities Based Assessments/Joint Capability Documents, appropriate Component requirements, legislative and Executive directives (e.g., National Research Action Plan, Precision Medicine Initiative, Office of Management and Budget Combat Casualty Care Assessment, National Defense Authorization Acts, etc.), and others as appropriate.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Previous President's Budget	14.998	13.438	15.714	-	15.714
Current President's Budget	14.953	13.438	15.714	-	15.714
Total Adjustments	-0.045	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.045	-			

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<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b>		<b>FY 2017</b>	<b>FY 2018</b>
<b>Project:</b> 700A: <i>CSI - Congressional Special Interests</i>			
Congressional Add: 467A – <i>Program Increase: Restore Core Research Funding Reduction (GDF)</i>		0.000	-
Congressional Add Subtotals for Project: 700A		0.000	-
Congressional Add Totals for all Projects		0.000	-
<b><u>Change Summary Explanation</u></b>			
FY 2016: Realignment from Defense Health Program, Research, Development, Test and Evaluation (DHP RDT&E), PE 0607100-Medical Products and Capabilities Enhancement Activities (-\$1.304 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Program (+\$1.304 million).			
FY 2017: Realignment from Defense Health Program, Research, Development, Test and Evaluation (DHP RDT&E), Program Element (PE) PE 0607100-Medical Products and Capabilities Enhancement Activities (-\$2.291 million) to DHP O&M Account, Budget Activity Group (BAG) 3 - Private Sector Caree (+\$2.291 million).			
FY 2017: Realignment from Defense Health Program, Research, Development, Test and Evaluation (DHP RDT&E), PE 0607100-Medical Products and Capabilities Enhancement Activities (-\$0.358 million) to USU DHP RDT&E PE 0603115 Breast, GYN and Prostate Cancer Centers of Excellence (+\$0.358 million).			
FY 2018: Realignment from DHP RDTE PE 0607100-Medical Products and Capabilities Enhancement Activities, Project 377 GDF (-\$1.500 million) to DHP RDTE PE 0603115-Medical Technology Development, Uniformed Services University, Project 478 Applied Proteogenomics Organization Learning and Outcomes (APOLLO) Consortium (+\$1.500 million) to support the White House-directed Cancer Moonshot initiative.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Health Agency										Date: February 2018		
Appropriation/Budget Activity 0130 / 2					R-1 Program Element (Number/Name) PE 0607100DHA / Medical Products and Capabilities Enhancement Activities				Project (Number/Name) 377A / GDF-Medical Products and Capabilities Enhancement Activities			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
377A: GDF-Medical Products and Capabilities Enhancement Activities	66.167	14.953	13.438	15.714	-	15.714	16.819	17.215	17.619	17.971	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The goal of the Medical Products and Capabilities Enhancement Activity is to test, evaluate, and support enhancement of existing medical products and medically-related IT systems within the areas of medical simulation, infectious disease, tactical combat casualty care, military operational medicine, and clinical and rehabilitative medicine. Additionally, funding supports the investigation of clinical intervention outcomes to support, enhance, and improve militarily unique Clinical Practice Guidelines. Program Element 6.7 efforts are short-term, high-impact projects. It is an intramural research program focused on evaluating new commercial medical capabilities suitable for theater, testing fielded capabilities to determine if they can function in an expanded or altered operationally-relevant environment, and investigating the potential to incorporate emerging medical or non-medical technologies into fielded medical systems. The program structure provides a flexible and responsive mechanism to accomplish these objectives.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> 377A: GDF – Medical Products and Capabilities Enhancement Activities	14.953	13.438	15.714
<b>Description:</b> Provide support for developmental efforts to upgrade medical products and capabilities that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.			
<b>FY 2018 Plans:</b> Solicit, review, and make awards for intramural proposals consistent with the intent of Program Element 6.7. For previously funded efforts: - Complete (a) adaptation of an existing (paper) pain management workbook into a mobile application software to assess accessibility and better patient engagement, (b) assessment of Service-specific platelet collection methods with the goal of recommending one universally accepted method , (c) evaluation of a commercial ultrasound system for military veterinary use, (d) evaluation of commercially available mosquito traps for their ability to collect disease transmitting mosquitoes, (e) evaluation of a new commercial mosquito tent trap for use in Southwest Asia - Continue (a) assessment of a commercially available mosquito traps for ability to collect disease transmitting mosquitoes, (b ) assessment of return to duty standards related to experienced pilots and crew having a small vision decrement in one eye while maintaining overall 20/20 vision, (c) the use of chemoprevention versus current regimens to reduce dosing requirements for malaria prophylaxis drugs - Initiate evaluation of (a) four commercially available assays the detection of the agent causing Lyme disease in order to identify the best one suited for military field use, (b) existing airway management devices used by military medics with the goal of			

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<b>Appropriation/Budget Activity</b> 0130 / 2	<b>R-1 Program Element (Number/Name)</b> PE 0607100DHA / <i>Medical Products and Capabilities Enhancement Activities</i>	<b>Project (Number/Name)</b> 377A / <i>GDF-Medical Products and Capabilities Enhancement Activities</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2017</b>	<b>FY 2018</b>
<p>producing evidence-based consensus recommendations to manage airway compromise, the second leading cause of potentially preventable death on the battlefield.</p> <p><b>FY 2019 Plans:</b>            Will continue to solicit, review, and make awards for intramural proposals consistent with the intent of Program Element 6.7. For previously funded efforts:            – Complete (a) evaluation of the use of chemoprevention versus current regimens to reduce dosing requirements for malaria prophylaxis drugs, (b) evaluation of four commercially available assays the detection of the agent causing Lyme disease in order to identify the best one suited for military field use and present findings to the Armed Forces Pest Management Board            – Continue multi-phase assessment of existing airway management devices used by military medics with the goal of producing evidence-based consensus recommendations to manage airway compromise, the second leading cause of potentially preventable death on the battlefield.</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b>            N/A</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		14.953	13.438
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
<p>The PE 6.7 Program Manager solicits proposals annually. Civilian and military intramural DoD laboratory investigators are eligible to apply. Awardees may collaborate with extramural (e.g., academia or industry) entities. Submitted proposals undergo a two-level review – one technical and one programmatic. A technical assessment of the proposals is solicited from the respective subject matter experts within the Joint Program Committees and the advanced development community. Following this, a programmatic review is performed by senior Service experts representing the science and technology base and advanced development. After the programmatic review, funding recommendations are forwarded to the Defense Health Agency – J9/Research and Development for final approval prior to award.</p>			
<b>E. Performance Metrics</b>			
<p>Principal Investigators will provide quarterly reports and a final report. Performance is measured based on the number of products for which testing either certifies use in a given environment (e.g., sufficiently ruggedized, airworthiness testing) and/or results in a recommendation of a specific product, and delivery of an enhanced product or knowledge product. The benchmark performance metric for research supported in this PE will be the enhancement of a maturity level that is typical of TRL 9.</p>			

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<b>Appropriation/Budget Activity</b> 0130 / 2					<b>R-1 Program Element (Number/Name)</b> PE 0607100DHA / <i>Medical Products and Capabilities Enhancement Activities</i>				<b>Project (Number/Name)</b> 457A / <i>AF Advanced Technology Development – Rapid Technology Transition</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
457A: <i>AF Advanced Technology Development – Rapid Technology Transition</i>	1.336	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<b>A. Mission Description and Budget Item Justification</b> Air Force - Medical Products and Capabilities Enhancement Activities: Funds support a developmental upgrade to a medical product that has been fielded and for which procurement funding is anticipated subsequent fiscal years.												
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>										<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> AF Advanced Technology Development – Rapid Technology Transition										0.000	-	-
<b>Description:</b> Provide support for developmental efforts to upgrade medical products and capabilities that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.												
<b>Accomplishments/Planned Programs Subtotals</b>										0.000	-	-
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b> \$1.1M FY15/17 Defense Health Program – Air Force Procurement funds												
<b>D. Acquisition Strategy</b> Cost-plus Fixed Fee contract award to performer via the Army-Natick Soldier Systems Research Development and Execution Center contracting activity.												
<b>E. Performance Metrics</b> N/A												

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<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
700A: CSI - Congressional Special Interests	2.382	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**  
 No FY 2017 DHP Congressional Special Interest (CSI) funding is directed toward core research initiatives in Program Element (PE) 0607100 - Medical Products and Capabilities Enhancement Activities.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2017</b>	<b>FY 2018</b>
<b><i>Congressional Add:</i></b> 467A – Program Increase: Restore Core Research Funding Reduction (GDF)	0.000	-
<b><i>FY 2017 Accomplishments:</i></b> [*** PLEASE ENTER CONGRESSIONAL ADD TEXT FOR PRIOR YEAR. ***]		
<b>Congressional Adds Subtotals</b>	0.000	-

**C. Other Program Funding Summary (\$ in Millions)**  
 N/A

**Remarks**

**D. Acquisition Strategy**  
 N/A

**E. Performance Metrics**  
 N/A